

## The PREFACE.

many particulars much outdone by those of other Creatures, and when at best, to be far short of the perfection they seem capable of: And these infirmities of the Senses arise from a double cause, either from the disproportion of the Object to the Organ, whereby an infinite number of things can never enter into them, or else from error in the Perception, that many things, which come within their reach, are not received in a right manner.

The like frailties are to be found in the Memory; we often let many things slip away from us, which deserve to be retain'd; and of those which we treasure up, a great part is either frivolous or false; and if good, and substantial, either in tract of time obliterated, or at best so overwhelmed and buried under more frothy notions, that when there is need of them, they are in vain sought for.

The two main foundations being so deceivable, it is no wonder, that all the succeeding works which we build upon them, of arguing, concluding, defining, judging, and all the other degrees of Reason, are lyable to the same imperfection, being, at best, either vain, or uncertain: So that the errors of the understanding are answerable to the two other, being defective both in the quantity and goodness of its knowledge; for the limits, to which our thoughts are confin'd, are small in respect of the vast extent of Nature it self; some parts of it are too large to be comprehended, and some too little to be perceived. And from thence it must follow, that not having a full sensation of the Object, we must be very lame and imperfect in our conceptions about it, and in all the propositions which we build upon it; hence we often take the shadow of things for the substance, small appearances for good similitudes, similitudes for definitions; and even many of those, which we think to be the most solid definitions, are rather expressions of our own misguided apprehensions than of the true nature of the things themselves.

The effects of these imperfections are manifested in different ways, according to the temper and disposition of the several minds of men, some they incline to gross ignorance and stupidity, and others to a presumptuous imposing on other mens Opinions, and a confident dogmatizing on matters, whereof there is no assurance to be given.

Thus

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Thus all the uncertainty, and mistakes of humane Reason, either from the narrowness and wandring of our Senses, or from the narrowness or delusion of our Memory, from the confinement of our Understanding, so that 'tis no wonder, that our Reasoning of natural causes and effects is so slowly improv'd, seeing the Senses contend with the obscurity and difficulty of the things, and the Mind with the forces of our own minds.

These being the dangers in the process of humane Reason, of them all can only proceed from the real, the methodical Experimental Philosophy, which has this advantage over the ordinary discourse and disputation, that whereas that chiefly consists of its Deductions and Conclusions, without much ground-work, which ought to be well laid on the Senses, so this intends the right ordering of them all, and the ordering of them to each other.

The first thing to be undertaken in this weighty matter is the fullness over the failings and an enlargement of the Senses.

To which end it is requisite, first, That there should be a careful choice, and a strict examination, of the reality and certainty of the Particulars that we admit: This is the first step on truth is to begin, and here the most severe, and most diligent diligence, must be employed; the storing up of all, without evidence or use, will only tend to darkness and confusion: we must not therefore esteem the riches of our Philosophical treasure only, but chiefly by the weight; the most vulgar and common be neglected, but above all, the most instructive are to be followed: the footsteps of Nature are to be trac'd, not only in her plain ways, but when she seems to be put to her shifts, to make many turnings, and to use some kind of art in endeavouring discovery.

The next care to be taken, in respect of the Senses, is to cure their infirmities with Instruments, and, as it were, to supply artificial Organs to the natural; this in one of them has